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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,131	11/21/2001	Hiroto Takeshita	0671.65997	2108

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EXAMINER

BERNATZ, KEVIN M

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 04/01/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,131

Applicant(s)

TAKESHITA ET AL.

Examiner

Kevin M Bernatz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 11 and 12 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 07 January 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9. 6) ☐ Other:

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DETAILED ACTION

Response to Amendment

1. Amendments to the specification and claims 1 - 12, filed on January 7, 2003, have been entered in the above-identified application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

3. The corrected or substitute drawings were received on January 7, 2003. These drawings are not accepted since the left margin must be 2.5 cm (see 37 CFR 1.184 (g)).

Claim Objections

4. Claim 3 is objected to because of the following informalities: the language "of another material forming said magnetic film" is confusing because it implies that the magnetic film is formed from at least 2 different materials. The Examiner recommends rewording the claim to read: "...lower than that of the material forming said magnetic film".

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Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1 – 5, 11 and 12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation “non-optical” is a negative limitation and the examiner reminds the applicant(s) that any negative limitation or exclusionary proviso must have basis in the original disclosure. See *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff'd mem.*, 738 F.2d 453 (Fed. Cir. 1984). **The mere absence of a positive recitation is not basis for an exclusion** (see MPEP § 2173.05(i)).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 3 are rejected under 35 U.S.C. 102(a) as being anticipated by Koichi ('514 A). See provided JP Abstract Translation of JP '514 A.

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Regarding claim 1, Koichi discloses a non-optical magnetic memory disk medium (*Title; Constitution; and "Co-Ni-Cr magnetic layer"*) comprising a substrate on which a groove (*i.e. recessed portion of element 1*) and a land (*i.e. non-recessed portion of element 1*) are concentrically formed (*Figure 1 and Purpose*), a magnetic film laminated on said substrate (*Figure 1 – element 3*); and a non-magnetic film deposited on said magnetic film on said groove to a position higher than the land of the substrate (*Figure 1 – element 5, wherein the "land of the substrate" is the non-recessed level of element 1*).

Regarding claim 3, Koichi discloses an organic material as the lubricant "non-magnetic film" (*"fluororesin lubricant 5"*) which the examiner deems would inherently possess a melting point less than the Co-Ni-Cr magnetic layer, which is admitted by applicants as being well over 450 °C (*page 12, last paragraph*).

9. Claims 1 – 3, 5, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohta et al. (U.S. Patent No. 5,313,357).

Regarding claims 1 and 11, Ohta et al. disclose a non-optical magnetic memory disk medium (*col. 3, lines 1 - 21*) comprising a substrate on which a groove (*element 16 – col. 3, lines 7 - 9*) and a land (*col. 3, lines 10 - 11*) are concentrically formed (*col. 3, lines 7 - 8*), a magnetic film laminated on said substrate (*Figure 1 – element 2*); and a non-magnetic film deposited on said magnetic film on said groove to a position higher than the land of the substrate (*Figure 1 – element 3, wherein the "land of the substrate" is the non-recessed level of element 1*). The claimed apparatus limitations (claim 11)

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are nominal magnetic recording apparatus limitations inherently present in a magnetic recording disk apparatus, as disclosed by Ohta et al. (*Figure 5 and col. 1, lines 22 – 58*).

Regarding claims 2 and 12, Ohta et al. disclose an embodiment wherein said non-magnetic film on the groove of said magnetic disk (*Figure 4 – element 3*) is deposited up to a height substantially equal to said magnetic film on the land (*element 2 – wherein the uppermost surface, i.e. “height”, of the non-magnetic film is shown to be exactly equal to the lowermost surface of the magnetic film on the land*). The Examiner notes that applicants' present claims are not directed to the height of the magnetic film, only that the height of the non-magnetic film be “substantially equal to the magnetic film on the land”.

Regarding claim 3, Ohta et al. disclose an organic material as the lubricant “non-magnetic film” (*col. 6, line 66 bridging col. 7, line 2*) which the examiner deems would inherently possess a melting point less than the Co-Ni-Cr magnetic layer, which is admitted by applicants as being well over 450 °C (*page 12, last paragraph*).

Regarding claim 5, Ohta et al. disclose a thickness range of the non-magnetic lubricant layer (*Figure 4 – element 3 and col. 5, lines 28 – 29*) wherein the level difference between the magnetic film on the land (*Figure 4 – element 2*) and an uppermost surface of the non-magnetic film is 5 nm or less (*i.e. the “uppermost surface of the non-magnetic film” is the lubricant layer 3 located above the land portion of the magnetic layer, which has a thickness of only 2 – 10 nm, thereby meeting applicants' claimed limitations*). The Examiner notes that applicants' present claims are not

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directed to the uppermost surface of the non-magnetic film on the groove, instead being directed to "an uppermost surface".

Claim Rejections - 35 USC § 103

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koichi as applied above, and further in view of Ohta et al. ('357).

Regarding claim 11, Koichi is relied upon as described above.

Koichi fails to explicitly disclose the claimed apparatus limitations.

However, Ohta et al. teach that the claimed apparatus limitations are nominal apparatus limitations necessarily present in a magnetic recording disk apparatus (*Figure 5 and col. 1, lines 22 – 58*).

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Koichi to include the claimed nominal apparatus limitations as taught by Ohta et al. since these limitations are necessarily present in a magnetic recording disk apparatus in order for it to function.

Response to Arguments

11. The rejection of claims 1 – 3, 5, 11 and 12 under 35 U.S.C § 102/103 –

Various references

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Meyer et al. (U.S. Patent No. 5,999,360) teach the nominal apparatus limitations (*Figures and col. 1, lines 36 – 60*) and further teach that it is known to deposit material over land/grooves to substantially equal height of the lands or slightly above in order to form a smooth surface conforming to the air-bearing surface of the head and slider used to read the medium (*Figures 15A – 15C and col. 7, lines 6 – 36*). JP 04-251435-A (see provided English Translation) disclose a structure comprising a rigid substrate with land and grooves, wherein a liquid lubricant (i.e. "non-magnetic layer") is deposited over the magnetic layer to a height higher than the land of the substrate (*Figures; Paragraphs 0020, 0021, 0027, 0082, 0083, 0104; and Examples*).

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Applicants' amendment resulted in embodiments not previously considered (*non-optical disk with concentric grooves*) which necessitated the new grounds of rejection, and hence the finality of this action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M Bernatz whose telephone number is (703) 308-1737. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



KMB
March 27, 2003



Paul Thibodeau
Supervisory Patent Examiner
Center 1700